



INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

Primary Grade 4
Term 2
2021-2022

Student's Book

THEME
3

Digital citizenship

ESSENTIAL QUESTION:

How can ICT tools benefit our lives?

William Tyner on location

8

SPOTLIGHT on Theme 3

Digital technologies are bringing many new opportunities to learn, research, and communicate. We can make use of technology to find out the news, to do school projects, and to socialize.

In this theme, you will learn about the positive impact that ICT applications have across many different areas and for different kinds of people. You will also examine different communication methods and learn to select the correct method for each situation.

9

LESSON I EXPLORER IN ACTION

Objectives

By the end of the lesson, I will be able to:

- Explain how digital technology helps us by making different tasks easier.
- Explain the features of digital citizenship.
- Describe "digital technology" and give some examples.

After the lesson, check the correct box: **I can . . .**

- | | | |
|------------------------------------|-----------------------------|---|
| ☐ Very well | ☐ OK | ☐ Need more work |
| ☐ Very well | ☐ OK | ☐ Need more work |
| ☐ Very well | ☐ OK | ☐ Need more work |

Engage

What different kinds of digital technology do you use every day? What do you use the digital tools for?

Learn

William Tyner is a cultural anthropologist, technologist, and filmmaker. He uses different types of digital technology in many aspects of his work. He works to find real solutions to problems that benefit local communities.

Mr Tyner thinks that using technology in a positive way can help people become successful digital citizens. He believes digital communication and helping people to connect with each other are important to exchange opinions and build good relationships.

Mr Tyner works with different organizations. They help to put individuals in contact with people or services that can help them. They do this by building easy-to-use digital tools and apps that provide people with the information they need. For example, if someone is finding it hard to pay their bills, they can use an app to find the institution from which services they wish to benefit.

In Egypt, there are many ways in which digital tools can help its citizens. Travel is made more convenient by booking tickets for trains, buses, and airplanes online. Many historical and cultural sites can now be visited by purchasing tickets easily through a website by clicking on your preferred choice. And a wealth of information is now at everyone's fingertips with the amazing EKB website.

Video

Watch the video about William Tyner's work. What ICT tools did they use?

Explore

You don't need to be part of a technology project to have experience of digital citizenship. All schools encourage students to learn about how to use technology responsibly, safely, and intelligently. How does William Tyner use ICT tools in a way that makes him a digital citizen? What interests you most about William Tyner's work, and why?

Review

1. Think of examples of using ICT tools in daily life.
2. How can ICT tools be used by organizations and governments to help local communities?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

LESSON 1 EXPLORER IN ACTION

Life Skills

1 Read and answer

Apps and websites can help make things more accessible to all of us. What apps and websites do you or your parents use regularly?

Graphic Organizer

2 Read and complete

Read the names in the box, then label each image with the correct name.

Egyptian Knowledge Bank Ministry of Tourism and Antiquities
Ministry of Education Ministry of Health and Population
Egyptian National Railways

Critical Thinking

3 Think and answer

Look at the following situations and decide which organization from Activity 2 would help you find out the information.

- The library in your local area is closed, and you need to look for some reference books.

- You want to know when your school exams are.

- One of your neighbors needs help booking a train ticket.

- Your family wants to book tickets to visit The Egyptian Museum in Cairo.

- You want to register your data or the data of a member of your family so you can get the Covid 19 vaccine.

4 Think and answer

Imagine you are going to do an interview with someone from your community to find out more about an issue that affects people in the city or neighborhood in which you live. Plan your interview.

Choose a topic that you're interested in:

Decide what information you want to find out:

Write three detailed questions:

Possible solution to the issue:

LESSON 2 Digital citizenship

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Explain what it means to be a digital citizen.	☐ Very well	☐ OK	☐ Need more work
• Explain key concepts of digital citizenship.	☐ Very well	☐ OK	☐ Need more work
• Discuss how to use ICT tools ethically, responsibly, and safely.	☐ Very well	☐ OK	☐ Need more work

Engage

What do you think it means to be a digital citizen?

Learn

Digital citizenship is the ability to use digital technology ethically, responsibly, and safely. This helps you to enjoy and take advantage of digital technology, and protects your digital footprint.

In Term 1, you learned some techniques that are part of digital citizenship. You learned how to:

- be ethical and responsible by treating others online with respect, and by crediting sources you find online.
- stay safe online by setting strong passwords and choosing websites you visit wisely, using updated software, and monitoring online screen time.

Digital footprint: Your digital footprint is a record of what you do online, including the sites you visit and the things you post; it can also include things that others post about you. This is why it's important to share information about yourself and others safely and responsibly.



As a digital citizen, you have certain rights and responsibilities.

Rights	Responsibilities
You have the right to not have your digital footprint copied or shared without your consent. If you upload videos, songs or stories you've created to the internet, you have the right to protection from piracy. (Piracy is the illegal circulation of content to be shared or sold to others.)	You must never commit piracy, with the aim of sharing or selling digital content to others.
You have the right to engage with others online. This includes communicating with family, teachers, and friends. It may also include posting positive ideas to help your community, and expressing your opinions in a way that doesn't offend others.	You should always show positive behavior in your communication online. A good rule is to share with your classmates and friends things you are comfortable saying face to face and positive things.
You have the right to provide and to access information and entertainment online while respecting intellectual property rights, and crediting the resources from which you took the information.	Be sure to evaluate what you're viewing or about to share. Ask: Is the source information safe to view and share? Is the source material a result of piracy?
You have the right to use the internet when you need or want to, while respecting the law.	Evaluate how you're using the internet. Is what you're looking at a productive use of time? Does it bring you joy, or does it cause you stress? Is the material safe? A good online/in-person balance is important for your well-being.

Explore

Imagine you've done one of the following:

- Thought of ways to connect people of determination in your community to volunteers who wish to help them in challenging everyday tasks
- Filmed a video explaining how to reduce community waste



How would you responsibly and effectively share this information online? Discuss with a partner.

Review

1. Explain the rights and responsibilities of digital citizenship.
2. Give examples of how you use ICT tools ethically, responsibly, and safely.

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Comprehension

1 Look and write. Then answer the question

Complete the chart. Read the rights of digital citizenship. Provide an example of how you can use each right responsibly.

Rights	Example
1. You have the right to engage with others online.	
2. You have the right to gather and post information and entertainment online.	
3. You have the right to use the internet when you want to.	

Create a new right that can be connected to digital citizenship. How can you use this right responsibly?

2 Think and write

Provide an example of how you can achieve each of the following:

- being a good digital citizen
- leaving a positive digital footprint
- sharing with your colleagues and friends information published on the internet
- avoiding piracy

Critical Thinking

3 Think and answer

Think about what you have learned about digital citizenship. Read the scenarios below. Explain how you would handle each one.



- You read a blog that talks about the best food to eat for breakfast. However, you disagree with the blogger's opinion. You want to write a response to share your thoughts on what you think is a healthier and tastier breakfast option. How do you express your opinion in a positive way?
- You've noticed lately that your friend is constantly online. He/She seems cranky and tired. Who do you talk to about this? What do you say?

ICT and me

4 Think and answer

Can you think of a time in your daily use of ICT tools when you or someone you know was a good digital citizen? Discuss this situation with your teacher and classmates.



LESSON 3 Positive impacts of ICT

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Explain how ICT tools can aid me socially, intellectually, and educationally.	☐ Very well	☐ OK	☐ Need more work
• Discuss the efforts made by the Egyptian government in providing safe and reliable digital resources.	☐ Very well	☐ OK	☐ Need more work
• Discuss how technology provides support for people of determination.	☐ Very well	☐ OK	☐ Need more work

Engage

How have ICT tools made your life easier?

Learn

As a digital citizen, you use ICT tools to learn, to share, and to communicate. In 2018, the Egyptian government provided digital tools and resources that can help you enjoy your time through digital books, activities, and watching videos and TV channels presented by experts in educational materials. Its goal is to implement a skill-based education, and ensure that all students can access learning materials equally.

Digital devices can help a non-verbal person communicate and to learn languages at school, using pictures. For students who can't leave their home due to health or other issues, digital devices can provide them with the connection they need to teachers, and the material they need to learn.

Digital devices can also be beneficial when unexpected events affect us, making us unable to leave our homes.

In addition to providing Egyptian citizens with access to learning materials in the digital library, the EKB holds webinars for teachers, students, and parents. The webinars provide guidance and tips on how to register on the website and use it.



Video-sharing platforms

You can use video-sharing platforms to learn or to teach new things. For example, if you want to learn how to create healthy meals, you can search for a video to show you how, step-by-step! If you have a skill you'd like to share online, you can use a video-sharing platform to post your own video, too. Remember to ask your teacher or a member of your family before you post anything online.

Socializing

You can socialize online as well. You can work with classmates outside of school on a project, virtually. You can video chat with your friends. You may even join an online group that shares your interests. Some common interests could include sports, movies, and games, like chess. Remember to ask an adult's permission before you join a group or communicate with someone online.

Common communication apps are the messaging app WhatsApp®, the social media platform Facebook®, and the virtual meeting app Skype®.

Explore

Think about a skill or talent you have that could help others. Explain what it is. How might you use a video-sharing platform to provide information about it? Share your ideas with the class.

Review

1. Explain the positive impacts of ICT tools on Egyptian students' lives.
2. How can ICT tools help people of determination? Why are these tools so important?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.



Comprehension

1 Look and complete

Complete the chart. Provide examples of how ICT can help citizens in the following areas.

Communication with friends and family	
Learning / Sharing information	
Entertainment	
Education	
Support for people of determination	

2 Read and write

Explain how platforms like the Egyptian Knowledge Bank help students in the following areas:

- their experience with ICT tools
- skills development

Critical Thinking

3 Think and answer

1. In what ways are these devices different?



desktop computer: _____



laptop computer: _____



cell phone: _____

2. Write examples of situations where you might choose to communicate using the following apps, and explain why.

WhatsApp® messenger: _____

Facebook® community group: _____

Skype® call: _____

Research

4 Write a summary

Learn how to make "Umm Ali". Search online to find step-by-step instructions on how to make it. Write the steps below. Remember to choose reputable, safe platforms. Be sure to credit your source.



LESSON 4 Internet communication

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Discuss how to use the internet to communicate with family and friends, and other citizens.	☐ Very well	☐ OK	☐ Need more work
• Explain the differences between synchronous and asynchronous communication.	☐ Very well	☐ OK	☐ Need more work
• Determine the ICT tools needed to communicate via the internet.	☐ Very well	☐ OK	☐ Need more work

Engage

How do you use the internet to communicate with family and friends? Do you always use the same tools to communicate?

Learn

You can use the internet to communicate synchronously and asynchronously.

Synchronous communication: communication that occurs in real time, with instant responses – exchanging information or files between two people at the same time using various digital tools, for example: video chats, live television shows, instant chat rooms.

Asynchronous communication: communication that does not require an instant response – transferring information or files between two people or more not necessarily at the same time using various digital tools and resources, for example: sending a file via email, recorded educational programs.

Synchronous communication

Video chats: These allow you to communicate live with one or more people via your mobile device or computer.

Tools needed: Device with a camera and speakers, and an application, or video chat software.

Instant messaging (IM): This allows you to send messages using the internet. Messages could include just text, or also pictures or videos.

Tools needed: IM software on your computer or a mobile application.



Cell phone application

A cell phone application is an application that runs on your mobile device. It allows you direct access to different programs such as email, instant messaging, social network pages, and video chats. Some applications could be pre-installed on your mobile device. Others need to be downloaded.

Chat rooms: These allow you to communicate in a group. They usually focus on just one particular subject. For example, people may use a chat room to maintain a discussion on a particular study subject.

Tools needed: web browsers for internet access or a mobile application e.g. Internet Explorer® or Google Chrome®.



Asynchronous communication

Email: This allows you to send and receive messages. Emails are a little more formal than IMs. For example, you could email your teacher about a school project. You could also use email to reach out to a government agency or an official.

Tools needed: internet browser to access an email website, or an email application on your mobile device.

Explore

Think about a community issue that you are passionate about. Provide an example of how you would use synchronous communication to share your thoughts on this issue with others. Then provide an example of how you would use asynchronous communication to deliver your message as well. Share your ideas with the class.

Review

1. In your opinion, what are the advantages of both synchronous and asynchronous communication?
2. What ICT tools do you enjoy using, or would you like to try in order to communicate? What tools do you enjoy the most?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Comprehension

1 Look and complete

Complete the chart. Put the different forms of internet communication in the correct column.

chat room email instant messaging (IM) video chat	
Synchronous communication	Asynchronous communication
_____	_____
_____	_____
_____	_____

2 Look and write

Look at the chart in Exercise 1. How can each form of communication help you to communicate your views, ideas, and feelings to others? Provide an example of when you might use each one to do so.



chat room



email



instant messaging (IM)



video chat

Critical Thinking

3 Think and answer

What is the digital equivalent to each of the following scenarios? Choose from the forms of internet communication you've learned in this lesson. Explain your choices. (Note: There may be more than one suitable form to choose from.)

getting immediate help: _____

formally reporting a crime: _____

helping a neighbor with a household chore or job: _____

finding a lost pet: _____

comforting someone: _____

ICT and Me

4 Think and answer

1. What is your favorite computer or mobile application? Why?

2. How have you used, or how would you use, each form of internet communication in this lesson?

LESSON 5 How to use e-communication

Objectives

By the end of the lesson, I will be able to:

• Discuss e-communication etiquette.	☐ Very well	☐ OK	☐ Need more work
• Explain how to use e-communication.	☐ Very well	☐ OK	☐ Need more work
• Use some digital tools to communicate with others.	☐ Very well	☐ OK	☐ Need more work

After the lesson, check the correct box: **I can . . .**

Engage

How do you show proper etiquette when communicating online?

Learn

How to use ICT tools to communicate

MAKING VIDEO CHATS

To start a call, you create a link to send to the participant(s). If you're joining a call, you click on a link and wait to be "let in" by the person who initiated it. Or you answer the call by clicking on the phone/video icon.



Make sure your microphone and camera are on. Sometimes, the person in charge of the call may mute people's microphones. You can also mute your microphone or turn off your camera at any time.

If your camera is on, anyone who is on the call will be able to see you. Be properly dressed and behave as if you were out in public. Take your turn when speaking. Make sure there is nothing in your background that indicates your address or any personal information that you do not want to share.

CHAT ROOMS

In a chat room, you can simply type and submit your comment. You can reply to messages too. Some participants may reply to your message. Remember, anyone who has access to the chat room will be able to read your messages. Be polite, helpful, and positive.

INSTANT MESSAGING

Click on the name of the person you'd like to chat with. Type your message and click the "Send" icon. Instant messaging is a fun, casual way to communicate. You may use phrases instead of full sentences, emoticons, or even images to communicate, but it's still important to show manners.

EMAIL

It's common to use emails in more formal situations – such as creating an EKB account and writing to your teacher. To send an email to someone, type their email address in the "To:" field. Provide clear subject information in the subject line.

When writing an email, be sure to use proper grammar. Be polite and clear. Use greetings and endings. If you're sending attachments, be sure the information you're sending is safe and accurate.

Explore

Review your response to the Explore question in Lesson 4. Write an email to your teacher to discuss the community issue you're passionate about. Explain to your teacher why the issue means a lot to you.

Review

1. Explain important factors to consider when using each type of ICT tool above.
2. Why do you think proper etiquette is an important part of communicating successfully online?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Comprehension

1 Look and write

Read and write responses. Be sure to consider the form of communication being used and to use proper etiquette.

1. You are part of a class chatroom. Your teacher has asked you and your classmates to come up with ideas for a medical fundraiser. Sara shares a suggestion: have a bake sale, with delicious cookies and cakes. You'd prefer a fundraiser that doesn't include unhealthy foods. Post your comment. Be sure to include your username.
2. One of your friends sends you an IM inviting you to come over. You're too tired, and you have a lot of homework to do. Send your friend a response.



sara_ahmed
has joined the chatroom

Hi! Why not a bake sale!

We could make cakes and desserts and sell them.

CHAT



Hey! Wanna come over today? 😊

Role Play

2 Participate in a video chat

Work with two classmates. Pretend you're on your mobile device or computer, and that you're having a video chat with them. Remember to take turns speaking.

Discuss one of the following topics:

- Your favorite sports team
- Your favorite foods
- Your favorite tv program
- A community or school issue that means a lot to you

3 Think and discuss

After your role play, explain what you feel your strengths were during the chat. Then explain what you felt you could have done better. How could you improve next time?

4 Write an email

Use your notes to write an email to your teacher about your experience.

New message

To

Subject

SEND









ICT and Me

5 Think and answer

Which of the following topics would you feel comfortable posting about online? Are there any you would not feel comfortable posting about? Explain why. (Add your own choices.)

- Your concerns about the community
- Sports
- Your concerns about the school
- Entertainment
- Your achievements
- Food
- Your family/friends

LESSON 6 Online learning environments and sources

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Explain the purpose of online learning environments.	☐ Very well	☐ OK	☐ Need more work
• Discuss online learning sources.	☐ Very well	☐ OK	☐ Need more work
• Explore questions with links to other school subjects.	☐ Very well	☐ OK	☐ Need more work

Engage

How have online learning tools helped you to learn about a particular subject?

Learn

Online learning environments

Online learning environments, like Edmodo®, allow teachers and students to communicate, no matter where they are. Teachers can provide virtual lessons and upload quizzes and homework assignments for students to access. Students can also send messages to their teachers, and post their completed assignments.

Online learning sources

There are multiple online learning sources that can help you to learn about different subjects. Here are just a few examples:

Lesson 5 - Supporting people of determination

Lesson 5 - Supporting people of determination

Overview Reviews Related Report Tags Share

DIGITAL PAGE ON EKB

LESSON 5 Supporting people of determination

Objectives

By the end of the lesson, I will be able to:

Search for

NATIONAL GEOGRAPHIC LEARNING **SPHINX** Since 1999

Task Cards

No 6 lesson plan or other activities being prepared. Educational publishers will be responsible and record of creating such components can be found in the list of activities and the product page.

Tags: **NATIONAL LEARNING OBJECT** **GRADE** **Grade 4** **Grade 5** **Grade 6** **Grade 7** **Grade 8** **Grade 9** **Grade 10** **Grade 11** **Grade 12** **Grade 13** **Grade 14** **Grade 15** **Grade 16** **Grade 17** **Grade 18** **Grade 19** **Grade 20** **Grade 21** **Grade 22** **Grade 23** **Grade 24** **Grade 25** **Grade 26** **Grade 27** **Grade 28** **Grade 29** **Grade 30** **Grade 31** **Grade 32** **Grade 33** **Grade 34** **Grade 35** **Grade 36** **Grade 37** **Grade 38** **Grade 39** **Grade 40** **Grade 41** **Grade 42** **Grade 43** **Grade 44** **Grade 45** **Grade 46** **Grade 47** **Grade 48** **Grade 49** **Grade 50** **Grade 51** **Grade 52** **Grade 53** **Grade 54** **Grade 55** **Grade 56** **Grade 57** **Grade 58** **Grade 59** **Grade 60** **Grade 61** **Grade 62** **Grade 63** **Grade 64** **Grade 65** **Grade 66** **Grade 67** **Grade 68** **Grade 69** **Grade 70** **Grade 71** **Grade 72** **Grade 73** **Grade 74** **Grade 75** **Grade 76** **Grade 77** 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LESSON 6 Online learning environments and sources

Comprehension

1 Think and answer

If you've been a student in an online learning environment, what did you like about it?

2 Look and write

Complete the chart. Look at the online learning sources. Choose which source you would use to do the following:

work on a science experiment study the landscape of Egypt
read about the Egyptian pyramids
learn how to make a delicious koshari meal
study climate issues for different countries complete a lab activity

Egyptian Knowledge Bank	
Vlaby	
National Geographic Kids	
Mapmaker Interactive	

Compare your answers with your classmates. If you have different responses, explain why you think your response is best.

Cross-Curricular Connections

3 Think and write

In Lessons 7 and 8, you will conduct a multimedia content search and present your findings using online tools. Look at the questions you chose in the Explore section on page 31, and think about the online sources you discussed with a partner. Write your notes to prepare.

Subject chosen: _____

Why I chose this subject: _____

Questions I have: _____

Online learning sources that I will use: _____

Why I chose the above online sources: _____

ICT and Me

4 Think and answer

In Term 1, Unit 1, you learned how to collect information and to present your findings using ICT tools. In Term 1, Unit 2, you learned how to conduct a digital search. How did this help you during your multimedia content search?

LESSON 7 Planning digital searches

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Discuss reliable and unreliable online sources.	☐ Very well	☐ OK	☐ Need more work
• Explain how to plan and conduct a digital search.	☐ Very well	☐ OK	☐ Need more work
• Discuss how to gather and present information using online sources.	☐ Very well	☐ OK	☐ Need more work

Engage

Think about what you already know about choosing online sources. Which types of sources would you aim to use in a digital search? Which types would you avoid? Explain why.

Learn

Conducting a digital search for reliable content

It's important to plan before conducting a digital search. Planning will help you focus on the information you're trying to gather.

1. Choose your topic. What do you already know about the topic? What else do you want to learn about it? Think and write notes.
2. Choose the types of online sources you will use. Remember that a digital search can include audio, video, and image sources, not just text sources. Consider asking your teacher, parent, or school librarian for advice about which sources to use for your research.
3. Prepare to evaluate the types of sources you've chosen. Are they reliable or unreliable?

While conducting your digital content search, be sure to stay focused on the topic you're researching. Once you find information that seems to answer your questions, evaluate it. Is it reliable?

Once you've determined that the information is reliable, take thorough notes. Be sure to write down what you're going to use from the source material. Don't forget to cite the source information in your notes. You will need to credit the source in your report.

Unreliable sources:

You may find factual information on social media sites, such as Facebook®, Wiki pages, and blogs. However, you are also likely to find information full of opinions, errors, and even lies. You must be wary of information you find on these types of sources.

Reliable sources:

Reliable sources are articles or information written and verified by experts. The information is presented in a professional fashion. The source information is well-written, without grammar or spelling mistakes.

Organizing and writing your report

After you've completed your online search, gather your notes and reliable source information.

Use your notes to write an **outline**. This will help you present the information in your report in a logical way.

Writing an outline

An outline should include:

- An introduction that introduces the topic of the report
- Supporting paragraphs that present the information
- A conclusion or final thoughts on the information that you have presented

Explore

Conduct a digital search to get answers to your questions from the Explore section in Lesson 6. Take notes while you conduct your search.

Review

1. Provide an example of a reliable digital source. Explain why it's reliable. Provide an example of an unreliable digital source. Explain why it's unreliable.
2. Discuss how you planned and performed your digital search.

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Research

1 Look and write

Review your notes on page 35. Write your sources below. Include all necessary information.

Sources:

Example: I found this information on the Egyptian Knowledge Bank. It's in a book called *The Great Pyramid and the Sphinx* by Asham B Bishay, published by Butterfly Readers.

2 Complete an outline

Use your notes from your search to create an outline that will help you write your report.

Introduction:	
Section 1:	
Section 2:	
Section 3:	
Conclusion:	

3 Write your report

Use your outline to write your report. Review the steps on page 34. Remember to cite your sources.

New message

To

Subject

SEND

ICT and Me

4 Think and answer

1. During your digital search, how could you be sure the sources you used were reliable? Did you come across any sources that you decided were unreliable? Name them.

2. How do you feel your outline helped to prepare you for writing your report?

3. How could you publish or share your report online?

LESSON 8 Synchronous and asynchronous communication

Objectives

By the end of the lesson, I will be able to:

- Discuss how to use synchronous and asynchronous communication with teachers and classmates.
- Communicate using digital tools.
- Discuss how to report findings using digital tools.

After the lesson, check the correct box: **I can . . .**

☐ Very well	☐ OK	☐ Need more work
☐ Very well	☐ OK	☐ Need more work
☐ Very well	☐ OK	☐ Need more work

Engage

Think about your findings from the digital search you conducted in Lesson 7. How might you communicate this information to your teacher using the appropriate digital tools?

Learn

The internet allows us to communicate instantaneously. This is wonderful: we can send a quick "Happy Birthday", have friendly conversations, quickly check doubts with people who are not present. But instant communication is not always a good thing. Sometime we need to give ourselves, or the people with whom we are communicating time to consider information we send, our question or their answer. So it is important to know when each type of communication is appropriate.



SYNCHRONOUS	Synchronous communication is appropriate: • between friends or close family • when the information is urgent or needs to be transmitted quickly • when the information is about day-to-day matters • when an answer does not require very much thought or preparation.
ASYNCHRONOUS	Asynchronous communication is appropriate: • between people who do not know each other well • when the information is important but not urgent • when the information is about sensitive or complex matters • when an answer requires thought and preparation
Remember, online learning environments include synchronous and asynchronous methods of communication. Choose the correct tool depending on the situation.	

Explore

Refer to the report you wrote in Lesson 7, on page 37. How do you communicate your findings to your teacher? Do you use a synchronous or an asynchronous digital tool?

Review

1. Discuss examples of when you might prefer to use synchronous or asynchronous methods to communicate with your teachers and classmates.
2. Discuss the digital tools you used to communicate your digital search findings to your teacher. Did you use a synchronous or an asynchronous form of communication? Explain your choice.

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Life Skills

1 Think and answer

You just communicated your findings to your teacher using digital tools. This time, choose a friend, classmate, or family member to communicate your findings to. Answer the questions below to prepare.

- Who did you choose?

- What communication tool will you use to communicate your findings? Explain why.

- Is the communication tool you chose synchronous or asynchronous? Explain how you know.

- Do you use the same wording as when you communicated your findings to your teacher? Explain.

- Do you have any questions about how to choose the right method of communication, based on your chosen audience? Write them here. Ask a teacher or family member for help.

2 Take notes

Look at these situations and decide if you would use a synchronous or an asynchronous tool for each. Write notes about your choices.

- Give urgent news that require immediate action.
- Explain why you have not been able to visit your friend, so that he/she can understand why you couldn't visit.
- Ask a friend if they are free tomorrow afternoon.
- Ask someone you know to send you a photo.
- Ask your mother what things she wants you to buy from the store.
- Send a wish for an occasion, such as a birthday.
- Ask someone who is going to visit if they can eat a certain type of food.
- Ask a question whose answer involves complex information.
- Send a message to someone who may be busy studying, at school, or working.
- Responding to an email or a written letter from a teacher.
- Send a message to a teacher who you do not know very well.

3 Communicate your findings

Discuss your findings with the person you chose.



ICT and Me

4 Think and answer

You have communicated your findings from a digital search.

- Compare how you communicated your findings to your teacher and to the person you chose. Clarify this.

- What might you do differently next time to communicate your findings? Explain.

REVIEW Theme 3

Vocabulary

1 Write and compare

Write a sentence for each set of words to explain the connection between them. Then compare your sentences with a partner.

1. synchronous communication and asynchronous communication

2. unreliable source and bias

3. digital citizenship and digital footprint

Review Questions

2 Read and answer

1. List two ideas to protect your digital footprint.
2. How can tablets aid students in their learning?
3. List three examples of synchronous communication.
4. List three examples of asynchronous communication.
5. Why are emails considered more formal than instant messaging?
6. Explain what an online learning environment is.
7. Give one example of a reliable source and one example of an unreliable source.
8. Explain how online learning environments use synchronous and asynchronous communication.

Critical Thinking

3 Think and answer

1. In what ways can you use e-communication to help your community?
2. Do you feel more comfortable communicating using synchronous communication or asynchronous communication? Explain why.
3. You have just completed research on a topic that means a lot to you. You want to share your results with your friends. What method of e-communication would you use to share this information? Explain your choice.

Essential Question

4 Think and complete

Think about the information that you have learned in this theme. How does it help you to understand how to use the internet to communicate effectively? Complete the sentence with your own ideas.

After studying this theme, I know that I can use the internet to communicate effectively because

Activity

5 Research, create, and show

Create your own exhibition about an online learning source that you find interesting.

Search for photographs, screenshots, or draw pictures of it. Then make labels and write captions for your photographs, screenshots, or illustrations. Include information about:

- what kinds of information / activities it has
 - how it works / how it provides information
 - how it helps people of determination to learn special features it has
- Invite your classmates to visit your exhibition.

THEME 4

Software projects

ESSENTIAL QUESTION:

How can different software programs help us?

Boy using a computer program robot kit

44



SPOTLIGHT on Theme 4

In this theme, you will learn about different types of programs that you can use effectively when carrying out your study tasks, and you will look for different usages of these programs. You will also design a simple digital project, making use of what you have learned.

45

LESSON 1 EXPLORER IN ACTION

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Describe different kinds of software and how they are used.	☐ Very well	☐ OK	☐ Need more work
• Discuss the role of different digital applications.	☐ Very well	☐ OK	☐ Need more work
• Identify ways in which ICT tools are helping wildlife.	☐ Very well	☐ OK	☐ Need more work

Engage

What do scientists want to find out when they look for animals in the wild?

Learn

Gautam Shah is the founder of *Internet of Elephants*. The organization uses ground-breaking digital tools to connect people with wildlife around the world.

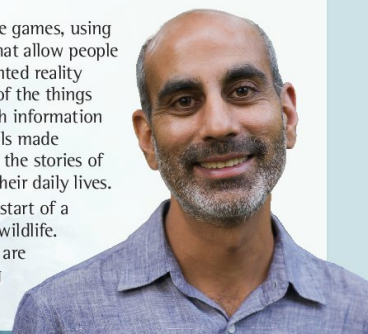
After living and working as an IT specialist in many countries including the United States, India, Argentina, and Kenya, Mr Shah realized he wanted to use his skills to make a positive impact on wildlife.

In 2014, Mr Shah quit his job in IT and began to look into ways that technology could be used for wildlife conservation. Wildlife conservation is protecting animals in their natural habitats.

Mr Shah believes in using technology and online games to bring wildlife into people's daily lives. For that reason, he set up *Internet of Elephants*. The team at *Internet of Elephants* works with animal conservation organizations from all over the world and uses the data they collect by GPS to help create interactive online games.

Internet of Elephants creates unique mobile games, using augmented reality, and data visualization that allow people to interact with amazing creatures. Augmented reality lets you virtually see the real environment of the things you would like to see, and presents you with information about them through screens and digital tools made specifically for this purpose. The games tell the stories of individual animals, and players can follow their daily lives.

Mr Shah hopes *Internet of Elephants* is the start of a new approach to engaging the public with wildlife. The mobile games mean that wherever you are in the world, you can interact with amazing animals in countries close to your country or far away!



Video

Watch the video about Gautam Shah's projects. What technology does the team use?

Explore

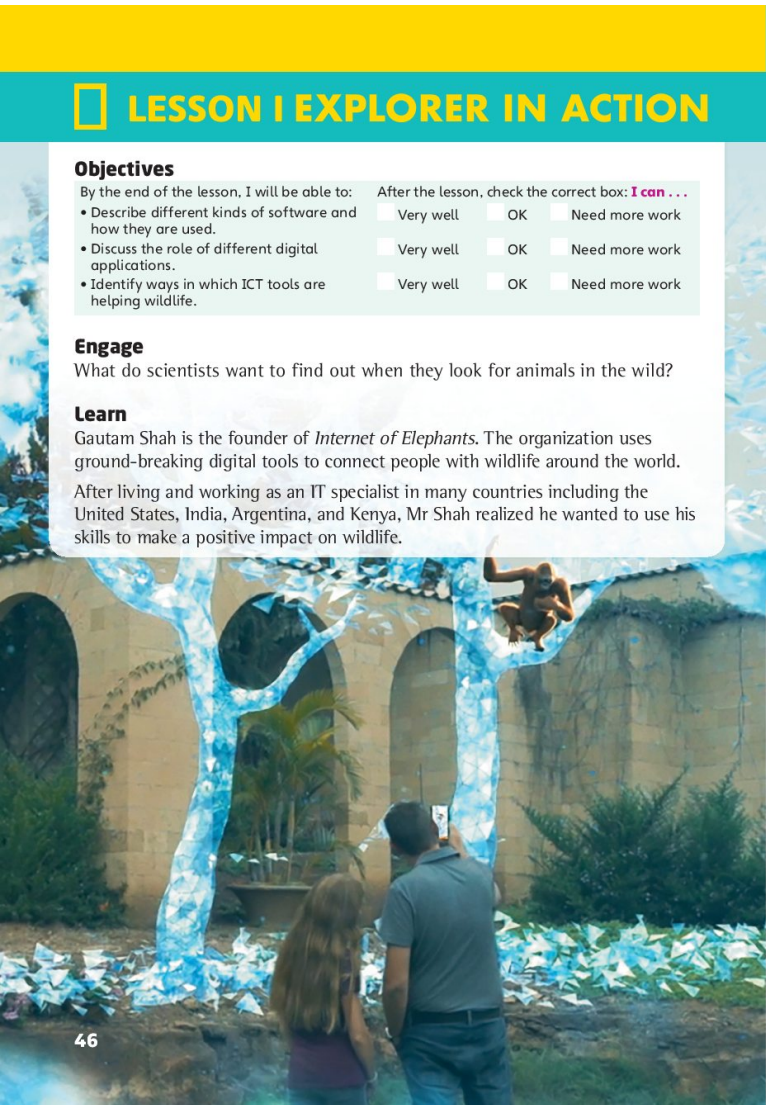
Being good at using ICT tools and knowing how to use technology creatively and productively can lead to many interesting careers. Research different careers by discussing with your teachers, family, and other students. Think about careers that benefit the community and society. What kind of jobs interest you the most? Explain why.

Review

1. What animals would you like to see in their natural habitats? What would you like to know about them?
2. What kind of technology could you use to help discover the information you need?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.



LESSON 1 EXPLORER IN ACTION

Life skills

1 Read and answer

What apps do you use regularly?

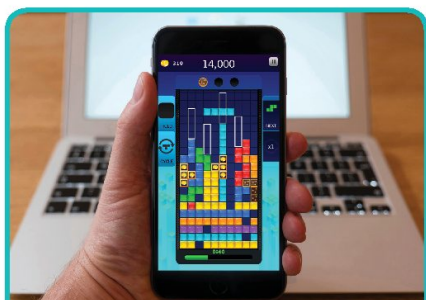
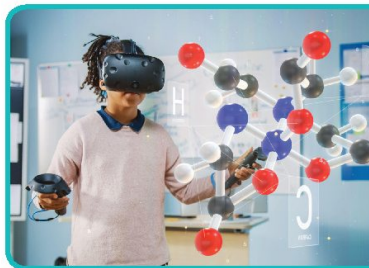
Graphic Organizer

2 Read and match the terms to the photos.

Mobile
gaming

Data display
software

Augmented
reality



Critical Thinking

3 Think and answer

Read the scenarios below. Which digital tools from Exercise 2 would be used for each scenario?

- 1 You're on a long, boring journey and don't want to read a book.
- 2 In class, you are learning about the solar system and your teacher wants you to have a full, immersive experience.
- 3 You're trying to explain some complicated statistics from a text but think your friend would understand it better in a chart.

4 Discuss these questions in pairs

- 1 Mr Shah uses his skills in IT and his interest in nature conservation to create apps that are fun and educational. What other interests could be combined with IT skills to create educational apps?
- 2 What inventions do you think will come next?

5 Think and answer

Imagine you are going to create an app that uses GPS, augmented reality, and mobile gaming. Complete this description about your app and how it will work.

My app will be called ...

The app is designed to ...

Three words to describe my app are ...

The app can be used ...

LESSON 2 Problem-solving skills

Objectives

By the end of the lesson, I will be able to:	After the lesson, check the correct box: I can . . .		
• Explain the steps involved in problem-solving.	☐ Very well	☐ OK	☐ Need more work
• Discuss how to break down big problems into smaller sections.	☐ Very well	☐ OK	☐ Need more work
• Analyze and solve a problem.	☐ Very well	☐ OK	☐ Need more work

Engage

Think about a problem you had with your phone or other digital device. What was it? Were you able to solve the problem? If so, how? If not, what did you learn that could help you the next time you have a similar problem?

Learn

Taking steps to solve a problem

Just like you do in everyday life, when using ICT tools, you may face problems that you'll need to think through and solve. Take steps to make problem-solving easier. Here are common steps that you can take:

Remember: In Term 1, Unit 1, Lesson 6, you learned about some common ICT problems and how to solve them. Solving them involved taking steps.

1. Construct a Hypothesis. A hypothesis is an educated guess about how things work. It is an attempt to answer your question with an explanation that can be tested.
2. Test your Hypothesis. Do not conduct any test which is not safe!
3. Was your test successful? If not, don't worry, we learn from our mistakes. What did you learn? How can this help you make your next hypothesis?

Breaking down problems into smaller sections

Some ICT problems may be more complicated than others. Work on solving such problems in small sections, step-by-step. Read the real-world problem below.

Your teacher asks you to help organize the class trip.

At first, the task you're being assigned may seem quite difficult. But if you break it down into multiple smaller tasks, it becomes more manageable.

- Decide on a destination for the trip.
- Determine when you will go and at what time.
- Find out the price of the trip per student.
- Determine how you and your class will get to the destination.
- Determine what everyone will need to bring with them.
- Come up with a list of rules to follow on the day of the trip.

When solving larger ICT problems, break them down just like the real-world example above.

Note: If you have a group of people solving a problem, assign each person one section.

Explore

Work in a group of four. Read the following problems and choose one of them:

- papers are not coming out of the printer during the printing process
- the speakers are not working
- the computer is having difficulty responding to user commands

Discuss how to solve it.

Review

1. How can breaking down a big problem into smaller sections help you?
2. How did working as a group help you to solve the problem in the Explore section?

Self-assess

Go to the Objectives at the beginning of the lesson. Check the correct **I can . . .** box.

Comprehension

1 Read and answer

Answer the questions.

Problem: Writing a research paper/report on a school subject.

Think of different ways to perform the task at hand.

1. Do you have a computer at home? No
2. Does the school have a computer? Yes
3. Can you use a word processor program? Yes
4. Can you format sentences on the Word writing program? No
5. Do you have some papers and colored pencils in your school bag? Yes
6. Can you use paper and colored pencils to write the research? Yes

1. Explain how the steps above show trial and error.

2. Write about a time you used trial and error to solve a problem.

3. Why do you think trial and error is an important element to problem-solving?

2 Think and answer

Look at the steps below. Put them in order.

Problem: Microsoft Word is not responding and you want to know why.

- Make sure your keyboard is well connected.
- Turn on your computer.
- Ask your teacher for help to solve the problem.
- Type a few letters on a Word page.
- Open Microsoft Word.
- Try connecting another keyboard, if available.

Compare with a partner. Do you have the steps in the same order?

3 Think and write

You and your friend want to see a movie. Make plans.

Collaboration

4 Read, discuss, and write

Work with a partner. Think of an everyday task that you both do. Break the task down into steps. Below are some examples (or choose your own):

- Getting ready for school
- Making a meal
- Doing laundry

ICT and me

5 Think and answer

Think about a common ICT problem that you have already solved. Break down the steps you took to solve it. Use an example from below, or come up with your own.

- Your device slows down
- You don't have an internet connection
